

REMARKS

After entry of this amendment, claims 8-11 and 30-56 remain pending. In the present Office Action, claims 8-11, 38-39, 41, 45-51, and 53-55 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki, U.S. Patent No. 6,529,479 ("Suzuki"). Claims 30-32, 34-36, 40, 42-44, 52, and 56 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki in view of Treadaway et al., U.S. Patent No. 7,002,941 ("Treadaway"). Claims 33, 37, and 45 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki in view of Snodgrass et al., U.S. Patent No. 5,365,551 ("Snodgrass"). Applicants respectfully traverse these rejections and request reconsideration.

Applicants have amended the specification to insert the specific reference to the parent application. The transmittal letter filed with the present application made the amendment but, for the avoidance of doubt, Applicants have presented the amendment in this response (and also have added the patent number of the issued patent corresponding to the parent application). Applicants have amended claims 8, 10, 38-39, 46-49, and 51-56 to more clearly recite features of the claimed invention. The amendments were not made in response to art, and are not believed to be narrowing. Accordingly, Festo estoppel should not apply.

Section 103 Rejection

Applicants respectfully submit that claims 8-11 and 30-56 recite combinations of features not taught or suggested in the cited art. For example, claim 38 recites a combination of features including: "encapsulating the Ethernet frame within a first frame; and transmitting the first frame over a very high speed digital subscriber line (VDSL) facility".

The Office Action asserts that Suzuki teaches the above highlighted features, citing col. 6, line 27 to col. 7, line 56 and asserting: "Suzuki does not explicitly teach encapsulating the Ethernet frame within a VDSL frame, but since Suzuki teaches the modem 101 stores the PPP packet, which encapsulates the Ethernet packet received from

the PC 106 in the data of an AAL5, and modulates the data stream of ATM cells to xDSL signals, it is obvious the Ethernet packet has to be encapsulated within an [sic] VDSL frame, before transmitting the VDSL frame over the VDSL facility." (See Office Action, page 3, last paragraph extending to page 4). Applicants respectfully submit that the above assertion from the Office Action mischaracterizes Suzuki. Suzuki's PPP packet does not encapsulate an Ethernet packet. Rather, the Ethernet packet encapsulates the PPP packet (in the PC 106) and is transmitted to the modem 101, which extracts the PPP packet from the Ethernet packet before encapsulating the PPP packet into the ATM cells and transmitting them on the xDSL interconnect. (Both the encapsulation and extraction occur through several intermediate layers, as set forth below). Thus, the packets transmitted on the xDSL interconnect do not include the Ethernet packet.

Specifically, Suzuki teaches: "Lastly, in the PC 106, the private IP datagram is stored in the data area of an Ethernet frame generated based on an MAC (Media Access Control) protocol as shown in FIG. 4(f), and is transmitted to a 10Base-T interface. The physical address of either of the devices between which a communication is made is specified in the header of the Ethernet frame. With this frame, the control for preventing a frame collision in the 10Base-T interface is performed. After the Ethernet frame transmitted to the 10Base-T interface in the above described way is received by the modem 101, the private IP datagram is extracted from its data area as shown in FIGS. 5(e) and 5(d). Next, in the modem 101, the UDP datagram is extracted from the data area of the private IP datagram as shown in FIG. 5(c). Then, in the modem 101, a PPTP (or L2TP) driver application is invoked based on the port number assigned to the header of the UDP datagram, so that the PPTP (or L2TP) packet is extracted from the data area of the UDP datagram by the invoked driver as shown in FIG. 5(b). Furthermore, in the modem 101, the PPP packet is extracted from the data area of the PPTP (L2TP) packet after the PPP session is identified based on the information assigned to the header of the packet, as shown in FIG. 5(a)....The modem 101 stores the PPP packet received from the PC 106 in the data area of an AAL 5 (ATM Adaption Layer 5) protocol data unit unchanged without further extracting the public IP datagram (refer to FIG. 4(a)) from the PPP packet, as shown in FIGS. 6(a) and 6(b). The AAL5 protocol data unit includes a

CRC (Cyclic Redundancy Check) code for correcting data in its trailer. The modem 101 then stores the AAL5 protocol data unit in the payload of one or more ATM cells as shown in FIG. 6(c). The algorithm for determining an ATM cell connection particularly relates to the present invention. This will be described later. Lastly, the modem 101 modulates the data stream of the ATM cells to an xDSL signal, and transmits the modulated signal to a subscriber line." (Suzuki, col. 7, lines 8-30 and 39-53).

For at least the above stated reasons, Applicants submit that claim 38 is patentable over the cited art. Claims 39-47, dependent from claim 38, are also patentable over the cited art and recite additional combinations of features not taught or suggested in the cited art.

Claim 48 recites a combination of features including: "encapsulating an Ethernet frame within a first frame to be transmitted over a very high speed digital subscriber line (VDSL) facility". The same teachings of Suzuki, highlighted above with regard to claim 38, are alleged to teach the above highlighted features of claim 48. Applicants respectfully submit that Suzuki does not teach or suggest the above highlighted features of claim 48 either. Accordingly, claim 48 is patentable over the cited art. Claims 49-52, dependent from claim 48, are also patentable over the cited art and recite additional combinations of features not taught or suggested in the cited art.

Claim 8 recites a combination of features including: "encapsulating said previously stored Ethernet frames within a plurality of frames, ... and transmitting said plurality of frames over said VDSL facility". The same teachings of Suzuki, highlighted above with regard to claim 38, are alleged to teach the above highlighted features of claim 8. Applicants respectfully submit that Suzuki does not teach or suggest the above highlighted features of claim 8 either. Accordingly, claim 8 is patentable over the cited art. Claims 9 and 30-33, dependent from claim 8, are also patentable over the cited art and recite additional combinations of features not taught or suggested in the cited art.

Claim 53 recites a combination of features including: "extracting an Ethernet frame from a first frame received over a very high speed digital subscriber line (VDSL) facility". The Office Action asserts that Suzuki teaches these features, citing Suzuki's teachings that the DSLAM 102 extracts ATM cells [from the received xDSL transmission], transmits the ATM cells on SONET, the access server 104 extracts the PPP packet and then the IP datagram, converts the IP datagram into the physical frame and then transmits it on the Internet (see Office Action, page 5, fourth paragraph). However, as noted above, the ATM cells transmitted to the DSLAM (from the Modem 101) no longer include the Ethernet frame which transported the packet data from the PC 106 to the modem 101. Accordingly, there is no Ethernet frame to extract from the ATM cells received from the xDSL connection in Suzuki. For at least these reasons, claim 53 is patentable over the cited art. Claims 54-56, dependent from claim 53, are also patentable over the cited art and recite additional combinations of features not taught or suggested in the cited art.

Claim 10 recites a combination of features including: "receiving frames from said VDSL facility, ... extracting Ethernet frames from the received frames". Applicants respectfully submit that Suzuki does not teach or suggest the above highlighted features of claim 10 either. Accordingly, claim 10 is patentable over the cited art. Claims 11 and 34-37, dependent from claim 10, are also patentable over the cited art and recite additional combinations of features not taught or suggested in the cited art.

Claim Objection

The Office Action objected to claim 55, noting that there were two claims numbered 55 and no claim 54. The Office Action indicated that the first claim "55" would be assumed to be claim 54. Applicants have amended the first claim "55" to be claim 54, in conformance with the assumption made in the Office Action.

CONCLUSION

Applicants submit that the application is in condition for allowance, and an early notice to that effect is requested.

If any extensions of time (under 37 C.F.R. § 1.136) are necessary to prevent the above referenced application(s) from becoming abandoned, Applicant(s) hereby petition for such extensions. If any fees are due, the Commissioner is authorized to charge said fees, or credit any over payment, to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5957-48401/LJM.

Respectfully submitted,

/Lawrence J. Merkel/

Lawrence J. Merkel, Reg. #41,191
AGENT FOR APPLICANT(S)

Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C.
P.O. Box 398
Austin, TX 78767-0398
Phone: (512) 853-8800

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